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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,642	06/10/2005	Hiroyuki Sugiyama	046124-5364	3707
55694 7590 01/09/2008 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209			EXAMINER PATEL, VIP	
			ART UNIT 2889	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,642

Applicant(s)

SUGIYAMA ET AL.

Examiner

Vip Patel

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-139 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 6-72 is/are allowed.
- 6) ☒ Claim(s) 73-139 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/05, 12/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 73-95 and 106-129 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 48-20944 B1, JP 47-15976 B1, or JP 55-78438 (all cited by the applicant).

JP 48-20944 B1 (see document) discloses an alkali metal generating agent comprising tungstate used as an alkali metal salt and silicon used as a reducing agent in an alkali metal generator. Cs is used as an alkali metal. The molar ratio of (Cs + K) Si is set to 0.1, the alkali metal generating agent is in powder form, a hollow body is formed by coiling a conductive plate into a coiled shape and overlapping end parts are welded together and the opening crushed by pressure to form a conductive metal container into which the alkali metal generating agent is filled, the metal container is heated by passing electricity through or by high-frequency induction heating, and a photoelectric surface such as a photoelectric tube is formed by the alkali metal generator. JP 47-15976 B1 discloses a container formed by rolling up a conductive metal plate fixing in place the overlapping opposing edges by spot welding to form a cylindrical body, and pressing both ends thereof together, filled with sodium tungstate powder and a reducing agent powder to form an alkali metal generator which is heated

bypassing current to form the photoelectric surface of a secondary electron multiplier tube. For example, sodium molybdate powder is used as an alternative to sodium tungstate powder and aluminum is used as the reducing agent, in this case, the weight ratio is 1 part by weight of sodium molybdate, 1 part by weight of potassium chromate, and 4 parts by weight of aluminum. JP 55-78438 A discloses a photoelectric surface containing alkali metal, a secondary electron emission surface and a photoelectron multiplier tube. The photoelectric surface and secondary electron emission surface are formed of cesium chromate which after completion it is impossible to differentiate between the photoelectric surface and secondary electron emission surface prepared from tungstate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

If this application currently names joint inventors, in considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 96-105 and 130-139 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 48-20944 B1, JP 47-15976 B1, or JP 55-78438 (as cited by the applicant).

Except all method of making steps are taught by the above cited reference. The limitations which are directed to the process of making are not deemed positive product limitation. Accordingly, no patentable weight has been given to such limitations (see MPEP 2113).

Allowable Subject Matter

Claims 1, 6-36, 37-72 are allowable. Claims 1 and 39 are allowable since prior art of record does not teach the claimed alkali metal generating agent comprising an oxidizer having at least one tungstate with an alkali metal ion as a counter cation, a reducer for initiating a redox reaction with the oxidizer at a predetermined temperature to reduce the alkali metal ion, wherein the substance amount ratio of the reducer with respect to the tungstate is 1.9 or more (or 4 or more) but 50.1 or less in combination with the other features of claim. Other claims are allowable since they are dependent on allowable independent claim.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vip Patel whose telephone number is (571) 272-2458. The examiner can normally be reached on 5.30am- 2pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Vip Patel/
Primary Examiner
AU 2879**